



OPERATIONS
A GLENCORE COMPANY

Kidd Operations Road to Zero Harm

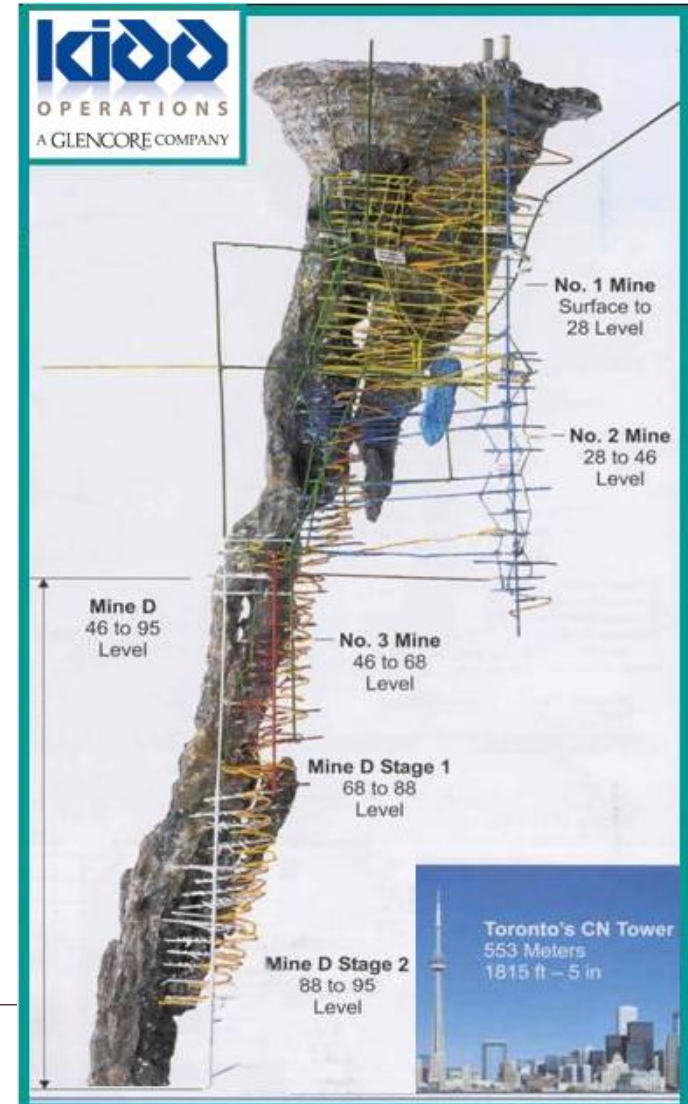
Edward Pieterse



Kidd Operations



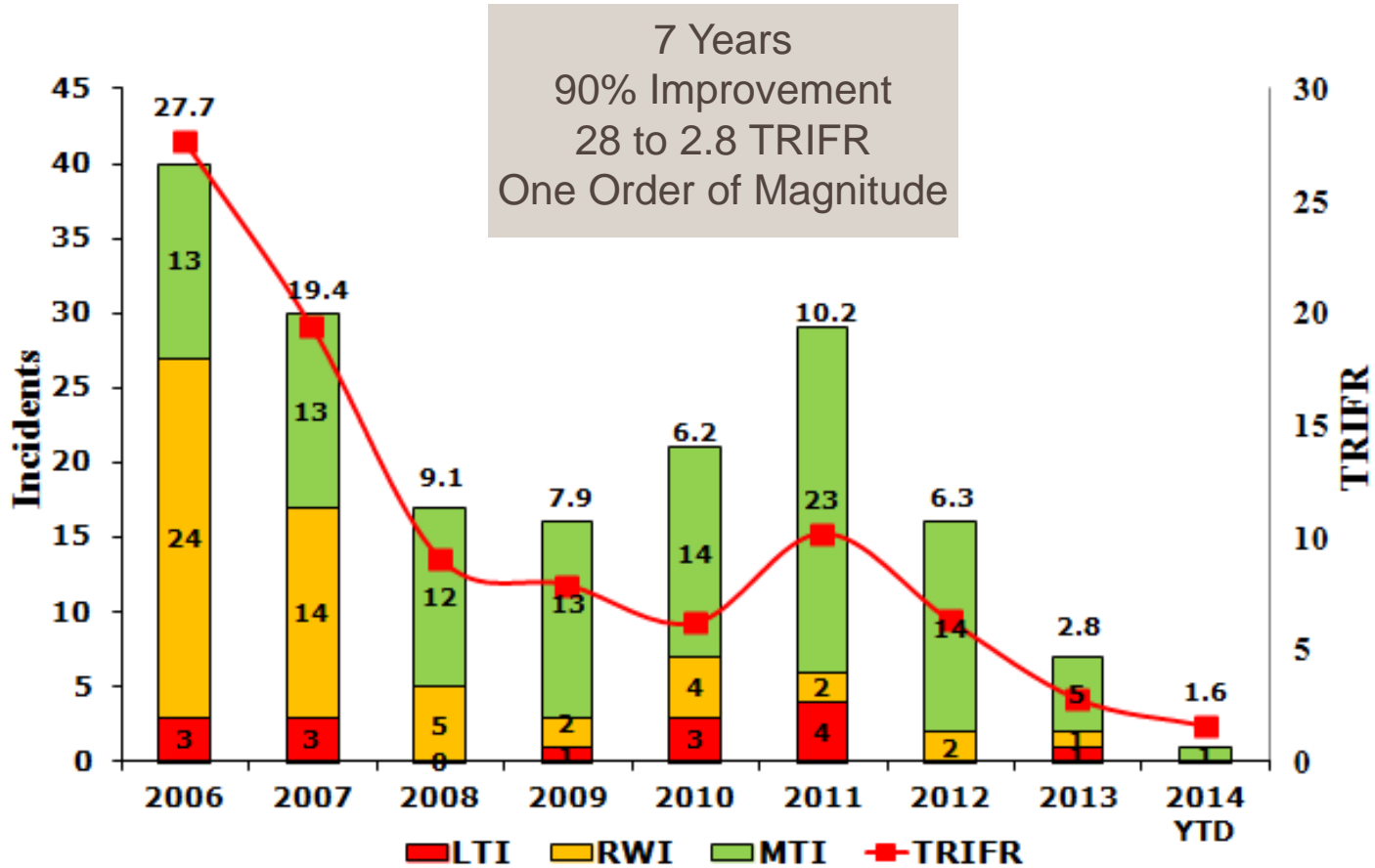
- Underground base metal mine Cu, Zn, Ag
- 150 Mt mined
- Mining Rate 2.3 Mt/Y
 - 1966 – Began as an open pit
 - 1972 - No. 1 Shaft sunk to 930m [3050ft]
 - 1972 - Kidd Zinc Plant commissioned
 - 1979 - No. 2 Shaft sunk to 1556m [5105ft]
 - 1981 - Copper operations began production
 - 1990 - No. 3 Shaft Sunk to 2108m [6916ft]
 - 2000 - Mine D approved by Board
 - 2006 - No. 4 shaft complete to 3000m [9882ft]
 - 2010 - Copper smelter and zinc plant closed
 - 2012 - Mining reaches 9500L [2896m]
 - 2014 – Attained 150 M tonnes milled milestone.



Kidd Operations Road to Zero Harm

- **Why we needed to improve**
- **Leadership**
- **Accountability**
- **Involvement**
- **Knowledge**
- **Design (Mistake Proofing)**
- **Behaviour**

Kidd Operations Safety Performance



2014 reached 1,000,000 hours with no recordable incident.

Effective Safety Program – Improvement Plan

Existing Program Analysis

- Reviewed each program element and the requirements
 - Ranked for effectiveness and quality
 - Developed a three year improvement strategy
 - Progress of the plan reviewed monthly by management team
-
- Proper Safety Culture - proactive
 - Proper Incident Management - reactive
 - Proper Workplace - proactive
 - Exhibit the Right Behaviors - proactive
 - Drive the Right Behaviors - proactive
 - Proper Equipment and Tools - proactive

Improvements occurred when we changed focus
from reactive to proactive

Leadership

Leadership - CEO Expectations

- Set and drove high expectations to the operations
- Commitment and visible leadership for all safety concerns:

COO and GM and focused on attaining aggressive improvement targets

Direct reporting every quarter of Safety performance

Review all reportable incidents directly with site GM

Detailed basic causes and preventative actions with Safety professionals(corporate involvement).

“Where did management fail”

“What were the systemic failures”



Leadership – Operational Management Commitment

- Management commitment provides the motivating force and resources for organizing and controlling activities within an organization

All workers having safety components within the Job Description Action Plan (JDAP)

Site wide safety pauses – Commitment to improve safety

Management safety tours and infield visibility

- Management actively analyzes the work and the worksite to anticipate, recognize and prevent harmful occurrences

- Management monitors the safety and health responsibilities of all personnel, whether salaried or hourly

- Management communicates and uses consistent messaging

Quarterly Meeting with all workers – Safety status and current business update

Standardising all crew meetings with managers message

Leadership - Managers in Field



Demonstrating Leadership



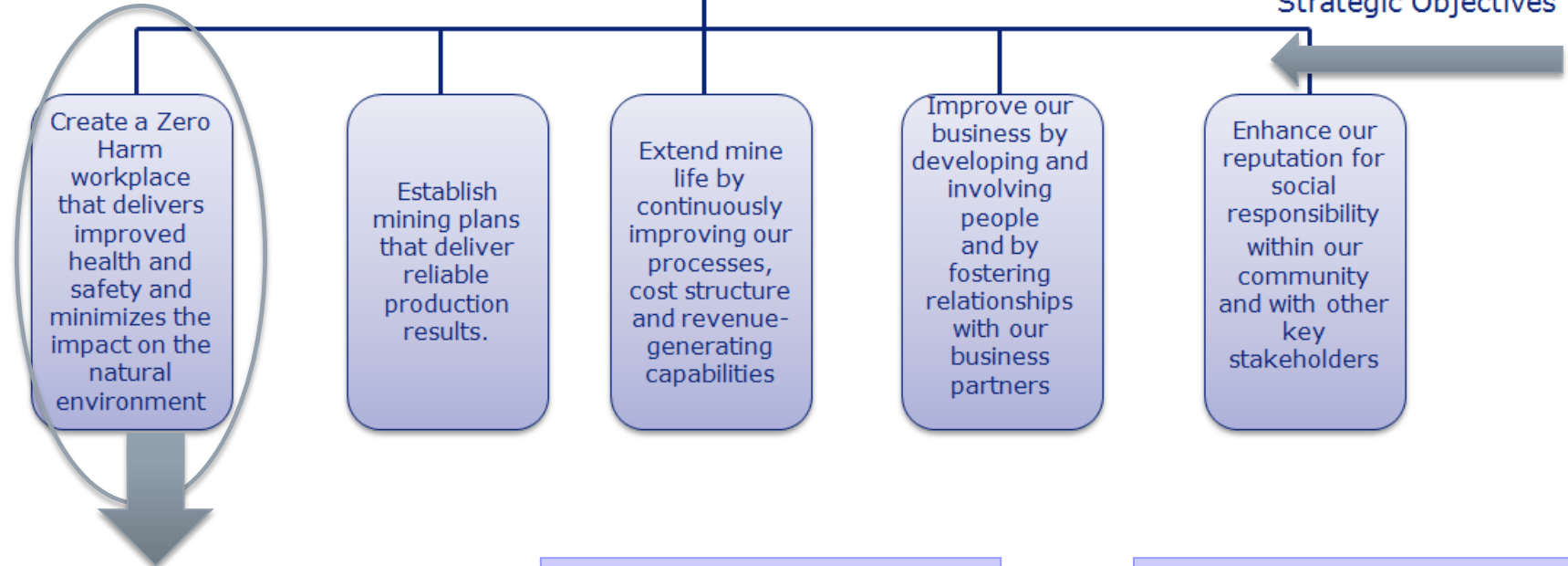
Accountability

It's our mission to maximize the value of the Kidd ore body and extend its operational life through safe and cost efficient deep mining and milling.

We are passionately committed to creating opportunities for our people to develop and use their knowledge, skills and talent. We are proud of our vital role in the community and we work in open partnerships to create enduring value with stakeholders.

Definition of Purpose

Strategic Objectives



Strategic Plan



Departmental Activities



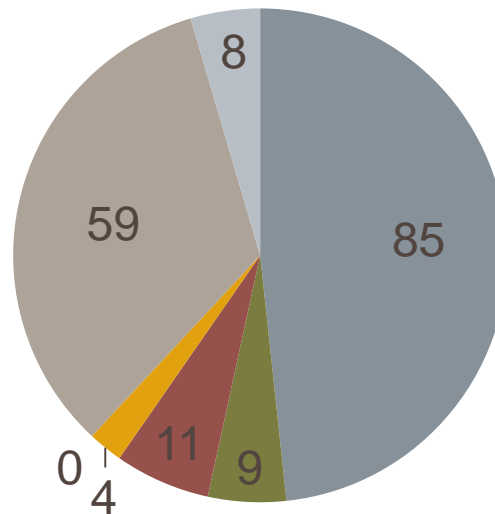
Individual Job Description Action Plans (JDAP's)

Management Accountability – Job Task Observations

Group	Completed	Target	Compliance
Operations	851	931	91%
Services	162	185	88%
Mine Operations	279	317	88%
Maintenance and Logistics	321	341	94%
Concentrator	89	88	101%

Job Task Observations Compliance Targeting the Risk Register – High Hazard Activities

JTO - Targeting HHA



- Mobile equipment interaction
- Working at heights
- Storage and use of explosives
- Working in confined spaces
- Working with high pressure water jet and industrial vacuum equipment
- Working with energy sources
- Occupational exposures to hazardous agents

Organizational Accountability

Measurement against Standards

- 1 Leadership, Strategy and Accountability
- 2 Planning and Resources
- 3 Behaviour, Awareness and Competency
- 4 Communication and Engagement
- 5 Risk and Change Management
- 6 Catastrophic Hazards
- 7 Legal Compliance and Document Control
- 8 Operational Integrity
- 9 Health and Occupational Hygiene



- 10 Environment, Biodiversity and Landscape Functions
- 11 Contractors, Suppliers and Partners
- 12 Social and Community Engagement
- 13 Life Cycle Management – Projects and Operations
- 14 Product Stewardship
- 15 Incident Management
- 16 Monitoring and Review
- 17 Emergencies, Crises and Business Continuity

Accountability - Metrics At All Levels

Workers, crews, superintendents and managers all have visible metrics.

Group	JTO	JSO	Close Calls	Injury	Incident	MOL	Leading	Lagging	SCORE
Operations	90%	78%	14%	86%	77%	100%	62%	88%	73%
Services	88%	102%	15%	81%	78%	100%	68%	87%	77%
	140%	207%	29%	100%	69%		125%	84%	109%
	210%	227%	14%	100%	100%		151%	100%	130%
			0%	100%	69%		0%	84%	56%
	70%	173%	129%				124%		124%
	94%		29%	75%	100%		61%	88%	74%
	94%	115%	43%	50%	100%		84%	75%	81%
	90%	0%	0%	100%	100%		30%	100%	58%
	0%		15%	100%	100%		8%	100%	54%
	0%	182%	30%	100%	100%		71%	100%	82%
		18%	0%	100%	100%		9%	100%	55%
	57%		44%	100%	75%		51%	88%	69%
	100%	27%	50%				59%		59%
	30%	82%	200%				104%		104%
	40%	145%	0%				62%		62%
		36%	11%	50%	82%	100%	24%	77%	56%
Mine Operations	83%	77%	6%	85%	84%	100%	58%	90%	71%
	86%	73%	5%	93%	85%	100%	53%	93%	70%
	0%	25%	100%	100%	100%		42%	100%	65%
	0%	10%	0%				3%		3%

YTD
Flash
Report

Year to Date, 2013										
Total Hours	LTI	RWI	MTI	Lost Days			TRIFR <3.2	LTIFR 0.0	DISR <67	
				LTI Days	RWI Days	Total Lost Days				
Kidd Operations	2,442,437.0	1	1	5	77	220	297	2.9	0.4	121.6
Gary Morin	1,029,782.0	0	0	2	0	0	0	1.9	0.0	0.0
Shannon Campbell	863,193.0	1	0	3	77	132	209	4.6	1.2	242.1
Dave Scott	549,462.0	0	1	0	0	88	88	1.8	0.0	160.2

Involvement

Involvement – Safety Teams

Operational Safety Team (OST)

- Created to identify gaps between safety strategy with the intent of improving deficiencies
- Provides feedback from the management team on upcoming initiatives and programs
- Reviews effectiveness and allows for modification of approaches to our safety program and safety culture, with a focus on improving safety results

Additional safety initiatives and programs:

- Committees with representation from both the workforce and management: JOHSC, OST, MSD, Dust, PPE, Noise, PASS Masters, Safe Start, etc...
- Involve key stakeholders in safety decisions and communications (e.g. large contractor groups)
- Conduct employee engagement surveys, to develop strategies
- Communications such as Copper Wire and TV, FYI, Hazard Alerts, Do You Know, etc...
- Safety Promotions

Involvement – Celebrating Safety Success



GENERAL MANAGER'S MESSAGE

Happy New Year to all.

I hope that everyone was able to enjoy the festivities with family and friends.

I would like to acknowledge the fantastic safety performance that we are seeing as we finished off 2013 and enter 2014. We have surpassed our TRIFR improvement target of 3.2, ending with a result of 2.9. But, most importantly, this represents a drop in recordable Injuries from 16 people in 2012 to seven people in 2013. We have all come to appreciate that having seven people hurt at work to the point of having to see a doctor remains seven people too many and that is why we will continue to set aggressive improvement targets for ourselves. Our 2014 target will be established and communicated over the next few weeks. One thing that we know right now though is that most crews will continue to have zero recordables as their targets and in fact, the entire Met Site has already committed to a target of Zero for 2014!

I'm convinced that a key to our success is the SafeStart program and no doubt the Extended Module training that was recently completed is helping each of us to be more aware of our State of Mind and providing concrete strategies to help improve habits, both at work and at home.

On behalf of the entire management team, I extend best wishes for a healthy and prosperous 2014!

Tom Semadeni
General Manager

SAFETY MILESTONES

Congratulations to Concentrator Production "C" Crew for achieving five years of no recordable incident.

Concentrator Production "C" Crew

Mark Bailey – Supervisor	Horn Boudreau	Darry Raymond	Marc Fournier	Abel Tetreault
Derek Racicot	Rick Carrier	Rick Abernethy	Randy Andrews	Pat Tremblay
Steve Poessou				

Congratulations to Mine Crew 321 under Supervisor Rick Charlebois and Jeff Tull for having achieved a target of 4 zeros for one year.



In photo, front row left to right:
Mike Butler, David Blanchard, Andy Gaudin, Bob Seguin, Jeannot Polvin, Robert Desrosiers, Eugene Jones, Marc Trudel, Marc Lapointe, Gerry Mulaly, Rick Davies, Leonard Gordon, Dale DeGulidice, Alain Bellavance, Denis Levesque, Luc Aubin, Michel Moreau, Eric Bergeron, Rick Charlebois, Michel Dompierre, Ryan Johnston, Norm Morissette, Fred Moller, Michel Cote, Shawn Boyce, Eric Bergeron, Jeff Tull

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Feedback & Content

Email your Copper Wire submissions, questions, comments, or suggestions to Carol Bergeron, Communications and Community Relations Coordinator at carol.bergeron@glenore.ca.

Copper Wire Submission

Submission deadline: Content by Thursday 3:00 p.m. for publishing in the following week's Copper Wire. Statistics by Monday 8:00 a.m.



Winners Workplace Safety North (WSN) - Presidents Award



Increased Knowledge

Knowledge - Risk Management Program

- Risk Assessments and Risk Control Audits performed in-house. When required, subject matter experts brought in to assist our auditor.
- Risk Management integrated with Incident/Accident Management...
 - Each month, incidents/accident are aligned with our risks, and the risk's CLR (Current Level of Risk) is adjusted accordingly
- Risk Management integrated with our Capital Management Program
 - Critical equipment/processes are treated as separate risks
 - If the risk is not at ALARP, projects are initiated to reduce the risk
 - The Stage Gate Process is used to execute the project as a large "risk treatment"
 - Project Management Manual includes Stage Gate

Kidd Operations' Site Risk Register
August 2011

CATASTROPHIC HAZARD (CH)
A Catastrophic Hazard is an activity, condition or material (i.e., glass) with the potential to result in disastrous consequences.

- Uncontrolled Ground Movement
- Exposure to Mine Gases
- Incidents During Mass Transportation of Workers
- Potential Fire on Surface or Underground
- Loss of Containment of Water Treatment and Tailings Ponds

HIGH HAZARD ACTIVITY (HHA)
A High Hazard Activity is an activity that exposes a person to a hazard with the potential for causing a single fatality and/or permanent disabling to more than one person.

- Mobile Equipment - Interaction with People, Objects and Energy Sources
- Working at Height
- Transporting, Handling, Storage and Using Explosives
- Working in Confined Spaces
- Working with High Pressure Water Jet and Industrial Vacuum Equipment

SIGNIFICANT RISK (SR)
A Significant Risk has an increased likelihood of causing a negative impact to the organization.

- Maintainability / Reliability of Critical Processes and Equipment
- Safeguarding of Machinery and Equipment
- Contractor Management and Engagement
- Uncontrolled Run of Muck and Excess Water Underground
- Employee Management and Engagement
- Emissions / Discharges - Loss of Environmental Control or Containment
- Uncontrolled Release of Energy
- Occupational Exposures to Hazardous Materials
- Failure of Lifting / Hoisting Devices

19 Significant Risks

Knowledge - Catastrophic Hazards

Exposure to Mine Gases



Incidents During Mass Transportation of Workers



Potential Fire on Surface or Underground



Uncontrolled Ground Movement



Loss of Containment of Water Treatment and Tailings Ponds



Knowledge – Training and Change Management

- Formal induction for all workers and visitors
- Professional development training day for all workers
- Individual knowledge – institutionalize by documentation and training



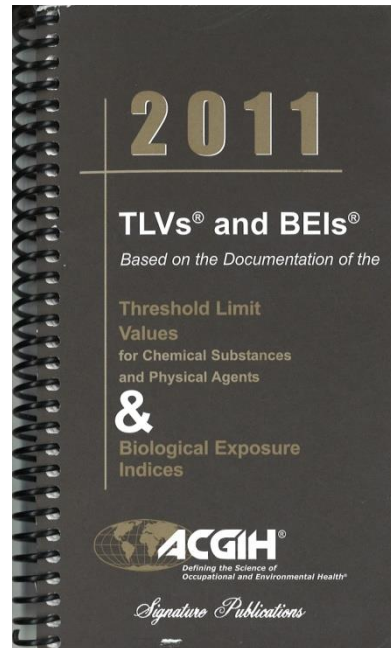
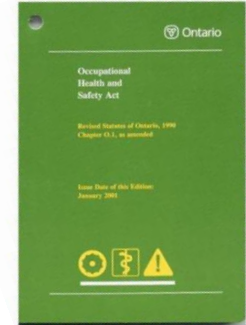
Formal Risk Assessment



Recognize, Assess and Control Hazards

Knowledge - Legal Compliance

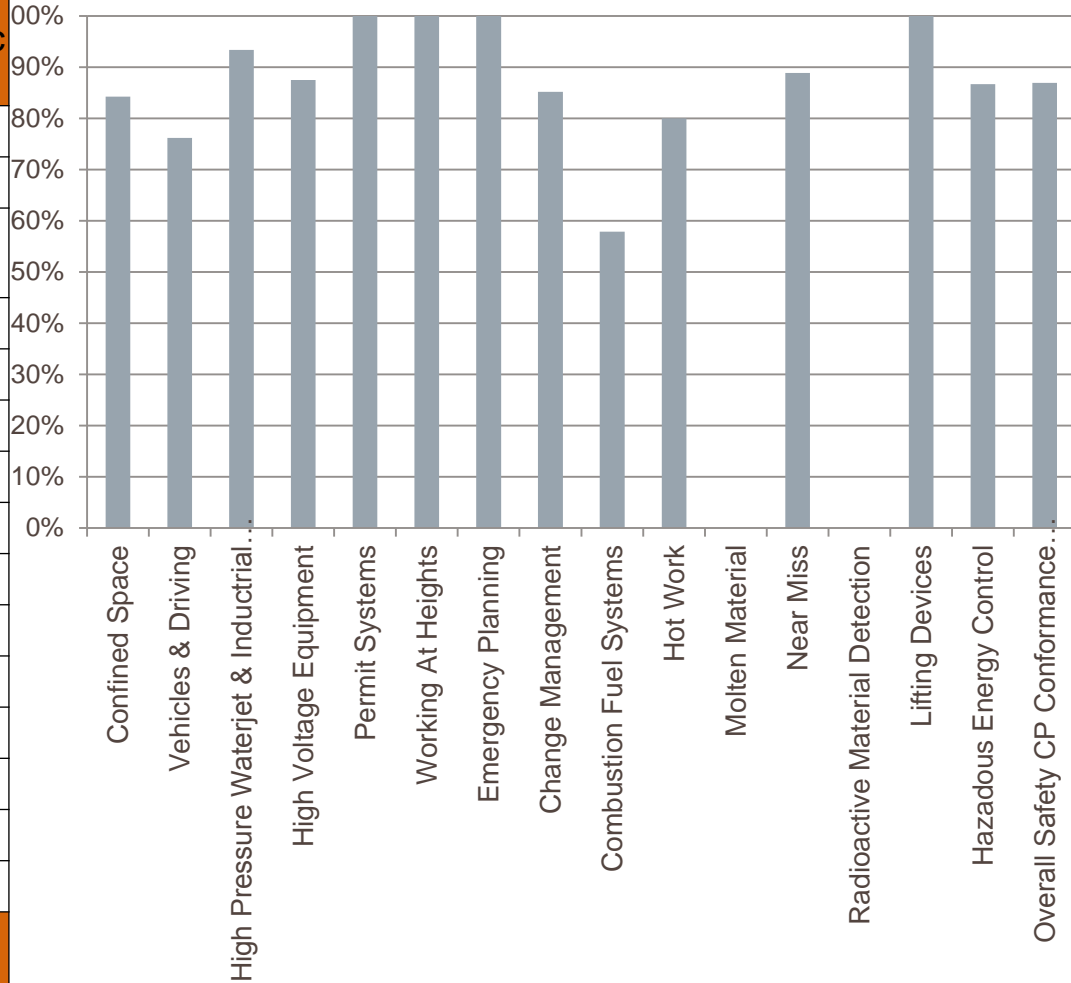
Legal Compliance



Design (Mistake Proofing)

Risk Control Protocols

Topic	% Conformance
Confined Space	84%
Vehicles & Driving	76%
High Pressure Waterjet & Industrial Vacuum	93%
High Voltage Equipment	88%
Permit Systems	100%
Working At Heights	100%
Emergency Planning	100%
Change Management	85%
Combustion Fuel Systems	58%
Hot Work	80%
Molten Material	N/A
Near Miss	89%
Radioactive Material Detection	N/A
Lifting Devices	100%
Hazardous Energy Control	87%
Overall Safety CP Conformance Score	87%



Life Cycle Management – Projects and Operations

Managing Risks – Hierarchy of Controls

- Define Life Cycle Costs
- Involve the Right People



Work Permits and Checklists

- Work Instructions and permission to work (Neil George Card)
- Prestart Checks
- Confined Space Permits
- Hot Work Permits
- Blasting Permits
- Digging Permit
- Safe Work permit

Process driven permits

Think Safe	Kidd Mine, Neil George Card		Attitude / Behavior / Choice											
	Date:	Shift:												
Line up	Task Specific Safety Alert:													
	Safety Theme:													
	Work Instructions Issued by Supervisor													
Do You Have	Employee:		Mobile Equipment:											
	Qualified to perform the task (are you trained, is there a procedure)													
	Proper Work Permits Available		WORK LOCATION											
	pre start <input type="checkbox"/> blasting <input type="checkbox"/> hot work <input type="checkbox"/> confine space <input type="checkbox"/> work alone <input type="checkbox"/> Personal Lock Out device Lock <input type="checkbox"/> Yellow Tag <input type="checkbox"/> Red Tag <input type="checkbox"/> WHMIS & MSDS (know the hazards / PPE to handle / store / dispose) Personal Diesel Control Tag M ³ /s available on level () Personal Protective Equipment													
Workplace Conditions	Ventila Barrica Refuge Vent D Ground House Tools & Fire Ex Air and Landin Enviror Explos													
	Blasting Permit To be used with _____ on _____ (date) Blast time _____ am / pm													
	Name of Blaster _____ Signature _____ Supervisor (Authorization) _____													
	Blast Details Description of Blast / Purpose of Blast <table border="1"> <thead> <tr> <th>Location</th> <th>Planned Blasting Time</th> <th>Type of Blast</th> <th>Quantity of Powder</th> <th>Gas Check Required</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Location	Planned Blasting Time	Type of Blast	Quantity of Powder	Gas Check Required					
	Location	Planned Blasting Time	Type of Blast	Quantity of Powder	Gas Check Required									
	Ventilation and Affected Areas <table border="1"> <thead> <tr> <th>Location</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>				Location	Comments								
	Location	Comments												
	Permitting of Guards <table border="1"> <thead> <tr> <th>Affected Area</th> <th>Guard Location</th> <th>Name of Guard</th> <th>Payroll #</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Affected Area	Guard Location	Name of Guard	Payroll #						
Affected Area	Guard Location	Name of Guard	Payroll #											
Releasing of guards <table border="1"> <thead> <tr> <th>Affected Area</th> <th>Guard Location</th> <th>Name of Guard</th> <th>Payroll #</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Affected Area	Guard Location	Name of Guard	Payroll #							
Affected Area	Guard Location	Name of Guard	Payroll #											
Are the _____ No Are the _____ No Are the _____ No # / (N) taken														
5 Point Safety System Are they _____ No Are they _____ No # / (N) taken														
Do they have the ability the tools and the attitude to work safely? If your answer is no, you must stop and correct the situation.														

All Surface spills must be reported as well as any Underground spills greater than 45 gallons

CHANGE	Observe Changing Conditions		
	Questions To Ask Yourself About Change		YES NO
TASK SPECIFIC RISK ASSESSMENT	Is this a new task?		
	Have any conditions changed since you last performed this task?		
	Is anything different today from the last shift you worked?		
If you observe any changes you must STOP...ASSESS RISK...APPLY CONTROLS			
RISK = CONSEQUENCE X LIKELIHOOD	Identify Hazards and Implement Controls		
	1. Describe the task at hand. (What are you about to do. Are you trained)		
	2. List the hazards. (What are the main hazards or energy sources involved in carrying out the task)		
	3. L		
	4. A		
SUPA	5. V		
	The Supervisor in Charge of the hot work must sign this form, retain one copy and deliver one copy to CPCR. Upon receipt of CPCR, the CPCR attendant must also sign this form. Supervisor's Signature _____ CPCR Attendant Signature _____ Oncoming CPCR Attendant _____		

ISO 14001...Remember P.I.C. Pollution Prevention/Continued Improvement/Compliance with Law

Assurance - Auditing

2013 Risk Control Audits (Planned and Completed)

Start Date	Type	Audit	Management Representative	Expected Duration (bus days)	Internal/External Resources	Internal Resources	
					Lead Auditor	Internal Auditor	Auditee /Other
12-Mar-13	Internal	Risk Control Audit - Working at Height	Ed Pieterse	4	Jim Francis	0	5
16-Jul-13	Internal	Risk Control Audit - Working in Confined Spaces	Ed Pieterse	1	Jim Francis	1	6
10-Sep-13	Internal	Risk Control Audit - Potential Fire on Surface or Underground	Ed Pieterse	4	Jim Francis	N/A	5

2014 Risk Control Audits (Planned)

Audit	Client	Management Rep	Auditor
Mobile Equipment - Interaction With People, Objects and Energy Sources	Kidd	Risk Owner = Gary Morin	Internal
Working with Energy sources (includes Workplace Electrical Safety Program)	Kidd	Risk Owner = Ed Pieterse	Internal
Uncontrolled Ground Movement (Strata/Slope Failure)	Kidd	Risk Owner = Zach Mayer	External
Working With High Pressure Waterjet (>5,000psi) and Industrial Vacuum Equipment (>27 inches of Hg or >1,000 cfm)	Kidd	Risk Owner = Dave Scott	Internal
Exposure to Mine Gases	Kidd	Risk Owner = Shannon Campbell	Internal
Uncontrolled Run of Muck	Kidd	Risk Owner = Shannon Campbell	Internal
Contractor Management & Engagement	Kidd	Risk Owner = Rick Peters	Internal
Employee Management and Engagement	Kidd	Risk Owner = Luc Brousseau	Internal
Labour Disruption	Kidd	Risk Owner = Luc Brousseau	Internal

Behaviour Focused

Behavior – People Need Help



Weak link with these controls human behaviour



Failed Controls



Exposure to Harm

At Risk Behaviours

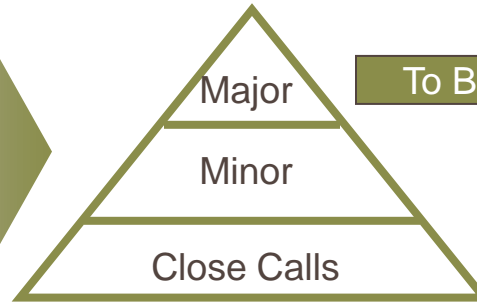
- Conscious or intentional behavior
- Habitual behavior
- Unintentional behavior

Behavior – SafeStart

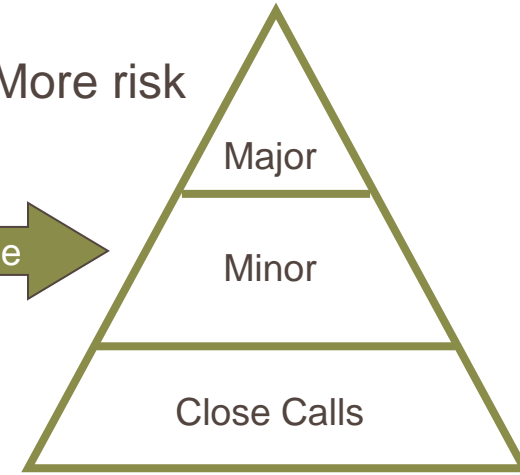
States (That Cause) Errors (Which cause) Less risk (To become) More risk

- ☑ Rushing
- ☑ Frustration
- ☑ Fatigue
- ☑ Complacency

- ☑ Eyes Not on Task
- ☑ Mind not on task
- ☑ Line of fire
- ☑ Balance, Traction, Grip



To Become



Hazards

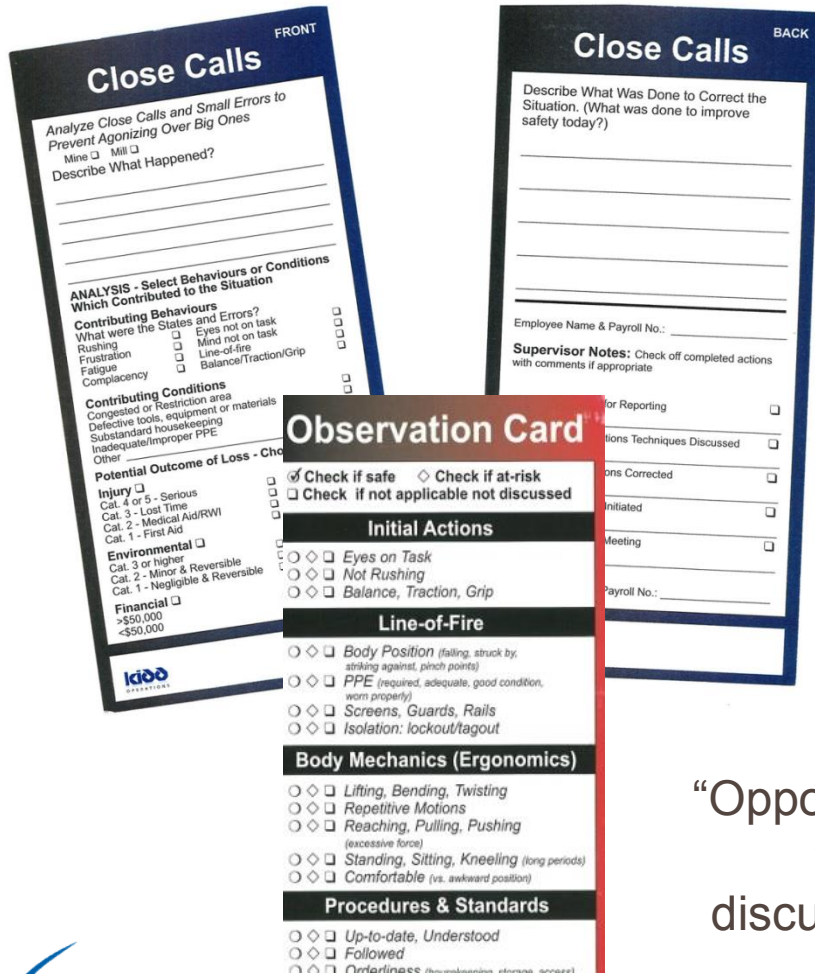
Hazards with a critical error

Awareness of state becomes an additional control layer

Self Trigger



Behavior – Infield Observations



Job Spot Observations
Close Calls
Job Task Observations

	2013	2014
Job Spot Observations	6,358	6,794
Close Calls	1,251	2,622
Job Task Observations	929	964
Total	8,538	10,380

KIDD OPERATIONS Planned Job Task Observation Form

Planned Job Task Observation Report

Date: _____

Name: _____ PR #: _____ Dept #: _____ Crew #: _____ Occupation: _____

Time with Company: _____ Time on Present Job: _____ Notification: _____

Type of Observation: _____ Classify Job to be Observed: Total in Advance YES NO

High Hazard Activity Significant Risk Catastrophic Hazard Other

List SOP or Reference Documents Used: _____

Job Observation

Box 1 Did the practices you observed comply with the applicable SOP or Skills Training for this task or job?	Yes / No	Box 4 Did the Job Task Observation initiate change in the SOP?	Yes / No
Box 2 Were Hazards identified and controls put in place?	Yes / No	Box 5 Was there Positive or Negative feedback?	Positive / Negative
Box 3 Was behaviour Reinforced or Changed?	Reinforced / Changed	Box 6 Were opportunities for improvement identified?	Yes / No

Describe clearly below any practices or conditions related to the items above that deserve compliment or correction.

Describe any opportunities for improvement identified above.

Follow-up Action

Supervisor/Observer: _____ Supervisor Signature: _____

I have reviewed the above form. Date: _____

Worker Signature: _____

Printed copies are not controlled.

Version	Document Number	Page
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“Opportunities for discussions”



Conclusions

Identify gaps in your current program versus the ideal program

Understand what you need to measure against to close gaps.

Develop a plan to work on closing the gaps with a focus on

- accountability, at all levels CEO, management and workers
- proactive measures and monitor
- root cause analysis on “near miss” events, learn from these events
- training and culture where individuals are empowered
- risks and hazards ensuring controls are effective
- monitor and adjust as you improve

